

LISTING OF THE CLAIMS:

1. (Original) A flange assembly for supporting a scavenging air supply to an internal combustion engine at a carburetor associated with the engine, said flange assembly comprising:

a thin-body flange configured to be abuttingly installed upon an end surface of a receiving carburetor in which a combustion air intake is located;

a combustion air aperture extending through said thin-body flange, said combustion air aperture being located in said thin-body flange for alignment with the combustion air intake of the receiving carburetor for establishing fluid communication therebetween when said thin-body flange is abuttingly installed thereupon;

a scavenging air aperture extending through said thin-body flange, said scavenging air aperture being located in said thin-body flange and spaced apart from said combustion air aperture; and

a valve assembly operatively coupled to said thin-body flange and having a valve element positioned at said scavenging air aperture for opening and closing said scavenging air aperture.

2. (Original) The flange assembly as recited in claim 1, wherein said thin-body flange is of one-piece, predominantly flat and rigid construction thereby affecting precision-location of said scavenging air aperture relative to said combustion air aperture and also facilitating precision-placement of said scavenging air aperture with respect to the receiving carburetor when said thin-body flange is installed thereupon.

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3. (Original) The flange assembly as recited in claim 1, further comprising:

fastener accommodating apertures extending through said thin-body flange and located to align with assembly screw receivers in the receiving carburetor when said thin-body flange is installed thereupon thereby facilitating precision-placement of said scavenging air aperture with respect to the receiving carburetor when said thin-body flange is installed thereupon.

4. (Original) The flange assembly as recited in claim 1, further comprising:

fastener accommodating apertures extending through said thin-body flange and located to be offset from assembly screw receivers in the receiving carburetor when said thin-body flange is installed thereupon.

5. (Withdrawn) The flange assembly as recited in claim 1, further comprising:

said scavenging air aperture being oblong in shape through said thin-body flange for establishing an inlet to a multi-branch manifold when said flange assembly is installed on a receiving carburetor and included on an internal combustion engine.

6. (Original) A flange assembly for supporting a scavenging air supply to an internal combustion engine at a carburetor associated with the engine, said flange assembly comprising:

a thin-body flange configured to be abuttingly installed upon an end surface of a receiving carburetor in which a combustion air intake is located, said thin-body flange having thickness, length and width dimensions;

a combustion air aperture and a scavenging air aperture each extending through said thin-body flange and across said thickness dimension and spaced apart, one aperture from the other; and

a valve assembly operatively coupled to said thin-body flange and having a valve element positioned at said scavenging air aperture for opening and closing said scavenging air aperture.

7. (Original) The flange assembly as recited in claim 6, further comprising:

said length and said width dimensions of said thin-body flange are greater than said thickness dimension; and

said combustion air aperture and said scavenging air aperture each has a longitudinal axis extending substantially perpendicular to a longitudinal axis of said thin-body flange.

8. (Original) The flange assembly as recited in claim 6, further comprising:

an axel of said valve assembly being positioned at said scavenging air aperture on said thin-body flange for associating a valve element with said scavenging air aperture.

9. (Original) The flange assembly as recited in claim 6, wherein said thin-body flange is configured to substantially cover an end surface of the receiving carburetor when said thin-body flange is installed thereupon.

10. (Original) The flange assembly as recited in claim 6, further comprising:

an axel for a valve element of a butterfly valve, said axel extending across said scavenging air aperture and being rotatably supported in axel apertures in said thin-body flange.

11. (Withdrawn) The flange assembly as recited in claim 6, further comprising:

a pivot hinge receiver, said pivot hinge receiver positioned adjacent to said scavenging air aperture on said thin-body flange for associating a flapper-type valve element with said scavenging air aperture.

12. (Original) The flange assembly as recited in claim 6, wherein among the dimensions of said thin-body flange, said length dimension is greater than said width dimension, and said width dimension is greater than said thickness dimension.

13. (Withdrawn) The flange assembly as recited in claim 6, further comprising:

said valve element being rotatably coupled to said thin-body flange and being constructed at least partially from a buffering material that is softer than the construction material of said thin-body flange thereby facilitating a seal between said valve element and said thin-body flange when said valve element is positioned in a closed configuration.

14. (Withdrawn) The flange assembly as recited in claim 6, further comprising:
said valve element being rotatably coupled to said thin-body flange; and
a buffering component positioned between said valve element and said thin-body flange
in a closed configuration of said valve element, said buffering component constructed from
material softer than material used in construction of said valve element thereby facilitating a seal
between said valve element and said thin-body flange when said valve element is positioned in
the closed configuration.

15. (Withdrawn) The flange assembly as recited in claim 14, wherein said buffering component
is a lip formed substantially about a perimeter of said valve element.

16. (Withdrawn) The flange assembly as recited in claim 14, wherein said buffering component
is a liner positioned at least partially within said thin-body flange and having a surface portion
exposed to said valve element for engagement therewith in said closed configuration.

17. (Withdrawn) The flange assembly as recited in claim 6, further comprising:
at least one pivot hinge receiver, a leveraging extension and a flapper-type valve element,
said pivot hinge receiver positioned on said thin-body flange remotely away from said
scavenging air aperture at least as far away as said combustion air aperture, and together with
said leveraging extension, positioning said flapper-type valve element to open and close said
scavenging air aperture.

18. (Withdrawn) The flange assembly as recited in claim 17, wherein said at least one pivot hinge receiver includes a plurality of pivot hinge receivers, each of said plurality of pivot hinge receivers being positioned on said thin-body flange on an opposite side of said combustion air aperture away from said scavenging air aperture for associating a flapper-type valve element supported on a leveraging extension with said scavenging air aperture.

19. (Withdrawn) The flange assembly as recited in claim 18, further comprising:

a plurality of leveraging extensions, each leveraging extension being coupled to said thin-body flange by a respective pivot hinge; and
said flapper-type valve element being attached to each leveraging extension at a remote position from a respective pivot hinge.

20. (Original) The flange assembly as recited in claim 6, wherein said scavenging air aperture and said combustion air aperture are positioned one above the other when said thin-body flange is abuttingly installed upon the receiving carburetor.

21. (Original) The flange assembly as recited in claim 20, wherein said scavenging air aperture is positioned above said combustion air aperture when said thin-body flange is abuttingly installed upon the receiving carburetor.

22. (Withdrawn) The flange assembly as recited in claim 20, wherein said scavenging air aperture is positioned below said combustion air aperture when said thin-body flange is abuttingly installed upon the receiving carburetor.

23. (Original) The flange assembly as recited in claim 6, wherein said thin-body flange is constructed so that a predominant portion thereof forms a substantially flat plate.

24. (Original) The flange assembly as recited in claim 23, wherein a carburetor-side surface of said thin-body flange is substantially planar for accommodating face-to-face engagement with the end surface of the receiving carburetor when said thin-body flange is installed thereupon.

25. (Withdrawn) The flange assembly as recited in claim 24, wherein an outwardly directed surface of said thin-body flange opposite to said carburetor-side surface of said thin-body flange is substantially planar and parallel to said carburetor-side surface of said thin-body flange.

26. (Original) The flange assembly as recited in claim 24, wherein a predominant portion of an outwardly directed surface of said thin-body flange is substantially planar and parallel in orientation to said carburetor-side surface of said thin-body flange.

27. (Withdrawn) A flange assembly for supporting a scavenging air supply to an internal combustion engine at a carburetor associated with the engine, said flange assembly comprising:

a thin-body flange configured to be installed upon a carburetor;

a scavenging air aperture extending through said thin-body flange;

a valve element rotatably coupled to said thin-body flange and configured to open and to close said scavenging air aperture; and

a buffering component positioned between said valve element and said thin-body flange in a closed configuration of said valve element, said buffering component constructed of material softer than said valve element's material of construction thereby facilitating a seal between said valve element and said thin-body flange when said valve element is positioned in a closed configuration.

28. (Withdrawn) The flange assembly as recited in claim 27, wherein said buffering component is a lip engaged substantially about a perimeter of said valve element.

29. (Withdrawn) The flange assembly as recited in claim 27, wherein said buffering component is formed as a liner positioned at least partially within said thin-body flange and having a surface portion exposed to said valve element for engagement therewith in said closed configuration.

30. (Withdrawn) A flange assembly for supporting a scavenging air supply to an internal combustion engine at a carburetor associated with the engine, said flange assembly comprising:

- a thin-body flange configured to be installed upon a carburetor;
- a scavenging air aperture extending through said thin-body flange; and
- a valve element rotatably coupled to said thin-body flange and configured to open and to close said scavenging air aperture, said valve element being constructed at least partially from a buffering material that is softer than material of said thin-body flange's construction thereby facilitating a seal between said valve element and said thin-body flange when said valve element is positioned in a closed configuration.

31. (Original) A flange assembly for supporting a scavenging air supply to an internal combustion engine at a carburetor associated with the engine, said flange assembly comprising:

- a thin-body flange configured to be installed upon a receiving carburetor designed to be associated with an internal combustion engine;
- a scavenging air aperture extending through said thin-body flange, said scavenging air aperture being located in said thin-body flange so that said scavenging air aperture is spaced at a distance from the receiving carburetor; and
- a valve assembly operatively coupled to said thin-body flange and having a valve element positioned at said scavenging air aperture for opening and closing said scavenging air aperture.

32. (Original) The flange assembly as recited in claim 31, wherein said thin-body flange is of one-piece, predominantly flat and rigid construction thereby affecting precision-location of said scavenging air aperture relative to the receiving carburetor when said thin-body flange is installed thereupon.

33. (Withdrawn) The flange assembly as recited in claim 31, further comprising:

said thin-body flange being of one-piece construction and comprising two offset planar portions connected by a transitional portion, each of said two planar portions having exposed side surfaces on the same side of said thin-body flange; and
said two exposed side surfaces of said two planar portions being substantially parallel, one to the other, and offset, one from the other in different planes.

34. (Original) The flange assembly as recited in claim 31, further comprising:

fastener accommodating apertures extending through said thin-body flange and located to align with assembly screw receivers in the receiving carburetor when said thin-body flange is installed thereupon thereby facilitating precision-placement of said scavenging air aperture with respect to the receiving carburetor when said thin-body flange is installed thereupon.

35. (Original) The flange assembly as recited in claim 34, wherein said thin-body flange is of one-piece, predominantly flat and rigid construction thereby affecting precision-location of said scavenging air aperture relative to said fastener accommodating apertures extending through said thin-body flange.

36. (Withdrawn) The flange assembly as recited in claim 31, further comprising:

said scavenging air aperture being oblong in shape through said thin-body flange for establishing an inlet to a multi-branch manifold when said flange assembly is installed on a receiving carburetor and included on an internal combustion engine.

37. (Original) The flange assembly as recited in claim 31, further comprising:

said thin-body flange having a thickness, a length and a width; said length and said width of said thin-body flange being greater than said thickness; and said scavenging air aperture extending through said thin-body flange and across said thickness thereof in a direction substantially perpendicular to a longitudinal axis of said thin-body flange thereby causing air flow through said scavenging air aperture to be substantially parallel with air flow through a combustion air channel of the receiving carburetor.

38. (Original) The flange assembly as recited in claim 37, further comprising:

an axel of said valve assembly being positioned at said scavenging air aperture on said thin-body flange for associating a valve element with said scavenging air aperture.

39. (Original) The flange assembly as recited in claim 37, further comprising:

an axel for a valve element of a butterfly valve, said axel extending across said scavenging air aperture and being rotatably supported in axel apertures in said thin-body flange.

40. (Withdrawn) The flange assembly as recited in claim 37, further comprising:

a pivot hinge receiver, said pivot hinge receiver positioned adjacent to said scavenging air aperture on said thin-body flange for associating a flapper-type valve element with said scavenging air aperture.

41. (Original) The flange assembly as recited in claim 37, wherein among the dimensions of said thin-body flange, said length dimension is greater than said width dimension, and said width dimension is greater than said thickness dimension.

42. (Withdrawn) The flange assembly as recited in claim 37, further comprising:

said valve element being rotatably coupled to said thin-body flange and being constructed at least partially from a buffering material that is softer than the construction material of said thin-body flange thereby facilitating a seal between said valve element and said thin-body flange when said valve element is positioned in a closed configuration.

43. (Withdrawn) The flange assembly as recited in claim 37, further comprising:

said valve element being rotatably coupled to said thin-body flange; and
a buffering component positioned between said valve element and said thin-body flange in a closed configuration of said valve element, said buffering component constructed from material softer than material used in construction of said valve element thereby facilitating a seal between said valve element and said thin-body flange when said valve element is positioned in the closed configuration.

44. (Original) A flange assembly for supporting a scavenging air supply to an internal combustion engine at a carburetor associated with the engine, said flange assembly comprising:

a scavenging air transfer member configured to be installed upon a side surface of a receiving carburetor designed to be associated with an internal combustion engine;

a scavenging air channel extending through said scavenging air transfer member, said scavenging air channel being located in said scavenging air transfer member so that said scavenging air channel is precision-positioned with respect to the receiving carburetor;

a valve assembly operatively coupled to said scavenging air transfer member and having a valve element positioned at said scavenging air channel for opening and closing said scavenging air channel; and

said scavenging air channel having a longitudinal axis extending through said scavenging air transfer member so that air flow through said scavenging air channel is substantially parallel with air flow through a combustion air channel of the receiving carburetor.

45. (Original) The flange assembly as recited in claim 44, further comprising:

an axel of said valve assembly being positioned at said scavenging air aperture on said scavenging air transfer member for associating said valve element with said scavenging air channel.

46. (Original) The flange assembly as recited in claim 44, wherein said scavenging air transfer member is of one-piece construction thereby affecting precision-location of said scavenging air channel relative to the receiving carburetor when said scavenging air transfer member is installed thereupon.

47. (Original) The flange assembly as recited in claim 44, further comprising:

said scavenging air transfer member being of one-piece construction and comprising two offset exposed side surfaces connected by a transitional portion, each of said two offset exposed side surfaces being on the same side of said scavenging air transfer member.

48. (Original) The flange assembly as recited in claim 47, further comprising:

said two offset exposed side surfaces being substantially parallel, one to the other, and positioned one from the other in different planes.